



# Taking health geography out of the academy: Measuring academic impact

Niamh K. Shortt<sup>a,\*</sup>, Jamie Pearce<sup>a</sup>, Richard Mitchell<sup>b</sup>, Katherine E. Smith<sup>c</sup>

<sup>a</sup> Centre for Research on Environment, Society and Health, School of Geosciences, University of Edinburgh, Scotland EH9 8XP, UK

<sup>b</sup> Centre for Research on Environment, Society and Health, Institute of Health and Wellbeing, University of Glasgow, Glasgow, Scotland G12 8RZ, UK

<sup>c</sup> Global Public Health Unit, University of Edinburgh, Scotland EH8 9LD, UK

## ARTICLE INFO

### Article history:

Received 15 February 2016

Received in revised form

1 June 2016

Accepted 27 June 2016

Available online 29 June 2016

### Keywords:

United Kingdom

Impact

Tobacco

Alcohol

Health geography

Knowledge exchange

## ABSTRACT

In recent years the academic landscape has been shifting and significantly affected by the introduction of an 'impact agenda'. Academics are increasingly expected to demonstrate their broader engagement with the world and evidence related outcomes. Whilst different countries are at various stages along this impact journey, the UK is the first country to link impact to funding outcomes; here impact now accounts for 20% of an academic unit of assessment's Research Excellence Framework (REF) result. This concept of 'research impact' implies that our work can effect change through one or more identifiable events in a direct, preferably linear and certainly measurable manner. In this paper, focusing on impact in social science, and policy-related impact in particular, we argue that such a cause and effect model is inappropriate. Furthermore that impact is not immediate or indeed linear within social science research. Drawing on recent work on alcohol and tobacco environments in Scotland we present a case study of impact, reflect on the process and respond to the challenges of moving beyond 'business as usual' public participation towards the measurement of outcomes. In doing so we critique the way in which 'impact' is currently measured and suggest a move towards an enlightenment model with greater recognition of process.

© 2016 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## 1. Background

The measurement of research's value and benefit is changing. In many countries it is now expected that academics should take their research beyond the academy and that it should have 'impact'. In the UK, impact was a major element of the Research Excellence Framework (REF) 2014. Here Government funding for research is allocated to universities based on REF results measuring the quality of research with each disciplinary-based Unit of Assessment (UoA) graded according to three categories: Output (65% of the overall result), Impact (20% of the overall result) and the Research Environment (15% of the overall result). Impact within REF is defined as 'an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia' (HEFCE, 2011, p.26) and is measured in terms of

'significance' and 'reach'. The 'audit' of impact reflects broader changes in higher education, with greater marketization and private sector models of governance amongst the principal features (Olssen and Peters, 2005). Beyond the UK, countries such as Australia (Excellence in Research), Canada (see for example Federation for Humanities and Social Science (Federation for the Humanities and Social Sciences, 2014)) and details on 'Community Engagement' guidance from Canada's Social Sciences and Humanities Research Council) and the Netherlands (the Standard Evaluation Protocol (SEP) exercise includes a measure of societal relevance) all consider impact or its equivalence. Furthermore governments in Sweden and Czech Republic are considering REF equivalents (Van Noorden, 2015). This paper focuses on the UK context as the only country for which the 'impact' of academic research is directly linked to the amount of funding university departments receive.

### 1.1. What is impact and how is it measured?

As academics, many of us seek to 'make a difference', to ensure that our work has value both within higher education and for many,

\* Corresponding author.

E-mail addresses: [niamh.shortt@ed.ac.uk](mailto:niamh.shortt@ed.ac.uk) (N.K. Shortt), [jamie.pearce@ed.ac.uk](mailto:jamie.pearce@ed.ac.uk) (J. Pearce), [richard.mitchell@glasgow.ac.uk](mailto:richard.mitchell@glasgow.ac.uk) (R. Mitchell), [katherine.smith@ed.ac.uk](mailto:katherine.smith@ed.ac.uk) (K.E. Smith).

beyond it. The extent to which we do this is questionable. Traditional notions of ‘knowledge exchange’, ‘knowledge transfer’ or ‘knowledge mobilization’ are familiar models. We write papers, present our work at conferences, publish it in peer-reviewed journals and teach our students. We may give a public lecture or use blogs and social media to promote these research outputs. Public engagement is too often one-sided dissemination, this model of knowledge dissemination has been criticised for not offering accurate, or useful, depictions of the relationship between knowledge, policy/practice and public understanding (Rein, 1980; Weiss, 1978). We know that this approach “is unlikely to alter prevalent elite perspectives on who the producers and consumers of knowledge are” (Pain et al., 2011, p. 185).

The inclusion of ‘impact’ within REF was supposed to challenge this failure. Within REF research, impact forms 20% of the overall ‘grade’ of a University Department. 6975 case studies were submitted for assessment to the 2014 REF, with each case study including a summary of the impact, reference to the underpinning research and sources to corroborate the impact. The number of case studies required from each department was determined by the number of full time equivalent (FTE) academic staff returned to REF (e.g. up to 14.99 staff – 2 case studies, 15–24.99 – 3 case studies etc.). Guidance, with examples of impact, was provided to REF panel members (REF, 2011) (see examples in Table 1). Acceptable evidence of such impact includes citation in public discussion by journalists, in policy or through quantitative outcome measures or evidence of documented change to professional standards or behaviours. Based on the panel assessment, case studies were graded on a scale ranging from U (little or no impact) through to 4\* (outstanding impact). Those that satisfy the criteria outlined for their returning panel will score highly. Scores from impact case studies are combined with those from outputs and environment profiles to produce an overall REF profile. Funds are then allocated based on the overall scores, with 3\* or above a requirement for funding allocation. This makes the distinction between 2\* (considerable impact) and 3\* (very considerable impact) crucial.

This shifting academic landscape, and the rise of the ‘impact agenda’ (also reflected at application stage in much research funding through the ‘Pathways to Impact’ statements), has been both welcomed and criticised. In geography those broadly supportive of the notion of ‘impact’ do so in part by emphasising knowledge’s co-production even as they recognise its increased marketization (Pain et al., 2011). Other geographers, more critical of the impact agenda, caution over the potential abandonment of critical academic ‘distance’ as research is increasingly informed by the needs and preferences of ‘policy elites and statutory bodies’ (Slater, 2012 p 118; Leathwood and Read, 2012).

Impact, as currently framed within REF assumes a linear pathway between ‘excellent research’ and its consequences beyond the academy. The case study structure emphasises this linear path (Greenhalgh and Fahy, 2015), something reported by Manville (2015) in their both REF interviews of assessment panel members: *‘There was a concern from some [panel members] that the format of the impact case study template channelled linear thinking’*

(Manville, 2015, p. 29). Whilst this may be appropriate for certain disciplines, for many, including those with public policy related outcomes, it is not. Research on the relationship between evidence and policy and popular, empirically informed, theories of the policy process and policy change, suggest that the route to policymaking is non-linear, messy and at times obscure (Smith and Katikireddi, 2013). A large literature exists on Knowledge Exchange/Transfer/Mobilization and while there are subtle differences between each of these terms, they essentially all refer to the process of connecting research to practice that have recently become collectively referred to as K\* (Shaxson and Bielak, 2012). Within this literature base, many conceptual frameworks summarising this non-linear process exist (see for example the Knowledge to Action Framework (Graham et al., 2006). Yet the idea that research and policy should be directly linked, that it is possible for researchers to ‘bridge’ ‘knowledge-to-action’ gaps and that such impact can be measured in a quantitative sense remains popular and is informing the approach that researchers, including, to a certain extent, ourselves, have taken to the impact agenda.

This paper describes a case study in which this persistent, yet widely criticised, thinking about achieving research impact informed our approach to knowledge exchange. We take an autobiographical approach in detailing our own experiences whilst voicing our concerns with impact in a broader concrete and practical sense. We also include an additional author, Katherine Smith, with particular K\* research expertise. The case study raises important questions. How can impact be meaningfully measured and assessed? What are the barriers and facilitators to impact and how might these be considered in ‘rewarding’ academic institutions? We explore these issues through assessment of an impact case study currently in development, one that draws on our work as health geographers. Following an introduction to the case study we explore some of the ways we have attempted to disseminate our research and involve other actors in its co-production (seeing research and dissemination as a collective exercise between partners). In exploring the facilitators and barriers to research use, we use a systematic review by Oliver et al. (2014) to organise our critique into thematic clusters (contact and relationships, organisations and resources, research and researcher characteristics, policymaker characteristics and policy characteristics). In addition we add a sixth theme of time, which is identified in Oliver et al. (2014) review as important but not discussed in the same detail as the other five themes. We chose to use Oliver et al.’s review given that it is the most recent systematic review on the subject (including 145 studies) and enabled us to critically reflect on the journey from research completion to research dissemination. After summarising the review findings with regards to each theme, we explain how our own approach to impact was informed by these issues and yet, despite this, has so far been unable to achieve the highest form of impact that REF seeks to reward (one that can make a difference or change through demonstrable effects). We reflect on these experiences to explain how and why we believe current efforts to measure and to reward research impact are problematic.

**Table 1**  
Examples of Impact given to Panel C (to which geography returns).

Health and welfare impacts	Influence or shaping of relevant legislation. Influencing policy or practice leading to improved take-up or use of services. Improved health and welfare outcomes.
Impacts on public policy, law and services	Shaping or influence on policy made by government, quasi-government bodies, NGOs or private organisations. Policy debate has been stimulated or informed by research evidence, which may have led to confirmation of policy, change in policy direction, implementation or withdrawal of policy. Improved public understanding of social issues.

## 2. Alcohol and tobacco environments: a case study

We recently explored the geography of alcohol and tobacco environments in Scotland. Our underlying research questions concerned the association between the density of tobacco and alcohol retailers, socio-economic deprivation, and inequalities in related health behaviours and health outcomes. We found: a social gradient exists in terms of the distribution of tobacco and alcohol outlets, with more deprived areas in Scotland having significantly more outlets (Shortt et al., 2015): Teenagers living in areas with the highest density of tobacco outlets are more likely to both smoke or to have ever experimented with smoking (Shortt et al., 2016): Adults living in areas with the highest density of tobacco outlets are more likely to smoke and less likely to quit (Pearce et al., 2015): Rates of both hospitalisations and deaths from alcohol related illness are higher in areas with the highest density of alcohol retailers (Richardson et al., 2014). These findings not only address questions of interest to health geographers and others, but also have potentially important implications in Scotland (in, calling, for example, attention to the need to consider the distribution of tobacco and alcohol outlets in efforts to equitably reduce the harm, and cost, associated with the consumption of alcohol and tobacco).

In turning to address the impact implications of our work, our impact plan was relatively straightforward. Our initial bid for the research element did not include an impact plan and as such we sought further funding following completion of the research. In collaboration with two external partners, Alcohol Focus Scotland (AFS) and Action on Smoking and Health Scotland (ASH Scotland), we applied for funding from the University of Edinburgh's Economic and Social Research Council's Impact Acceleration Account (ESRC IAA). This scheme provides resources for knowledge exchange activities that build relationships and networks to maximise and accelerate the impact of research. Funding was secured, and a programme of work conducted over the course of a year (2015) focussed on two areas of activity: data and information sharing and policy maker and researcher engagement. Our two partners were involved in all stages of the impact plan, from grant application through to infographic and website design and approval of final report. Alcohol Focus Scotland were also involved in the initial alcohol research.

### 2.1. Data and information sharing

In collaboration with our partners we created two 'infographics', one on tobacco and one on alcohol, summarising the knowledge base in Scotland alongside our research results (Fig. 1a and b). These were disseminated in various ways. On the release of each infographic, we wrote a blog post highlighting the research results and the availability of the infographic (accessible at [www.cresh.org.uk](http://www.cresh.org.uk)). The infographics were widely tweeted and displayed at conferences and public events. Our non-academic partners, ASH and AFS, used the images from the infographics in presentations and promotional material. The tobacco images have been used in ASH Scotland's annual report 2015 (<http://www.ashscotland.org.uk/media/6861/annualreportpdfview.pdf>) and in ASH Scotland's 2016 election manifesto (in advance of the Scottish Parliament elections in May 2016) ([http://www.ashscotland.org.uk/media/508667/ash-manifesto\\_st5.pdf](http://www.ashscotland.org.uk/media/508667/ash-manifesto_st5.pdf)). As the related academic papers were published, we worked closely with the press office and co-wrote press releases with our non-academic partners, resulting in widespread media coverage, both national and international (e.g. The Times, BBC News, Scotsman, The Sun, The Irish Times).

As the alcohol and tobacco outlet data retrieved for the study was of potential interest to many, we were keen to share it. To achieve this we developed a webmap ([www.cresh.org.uk/webmap](http://www.cresh.org.uk/webmap))

enabling users to map and visualise the provision of alcohol and tobacco outlets in an area of interest (e.g. their local neighbourhood) and to download the information for further analysis. It also provides contextual information such as the number of outlets in the area, how this figure compares to the Scottish average, and the health-related burdens (i.e. alcohol and tobacco-related deaths).

### 2.2. Policy maker and researcher engagement

With our non-academic partners, we promoted research to key policy-related audiences. In November 2014, we provided evidence to the Local Government and Regeneration Committee's scrutiny of the Air Weapons and Licensing (Scotland) Bill. We presented our findings to demonstrate the association between alcohol outlet density, mortality and morbidity. We called for a national register of alcohol outlets so as to aid further research (<http://www.scottish.parliament.uk/parliamentarybusiness/report.aspx?r=9644>). The evidence from the research was used in an amendment to the bill proposed by Dr Richard Simpson MSP to develop a national register of licensed premises. In the final debate on the bill, the amendment was dropped with reference made to considerations elsewhere in the Scottish Government of a similar register. Final discussion of the bill, including reference to our research, can be seen here (<http://www.scottish.parliament.uk/parliamentarybusiness/report.aspx?r=10038&i=92153>).

Our work was presented at local Licensing Forums, Alcohol Focus Scotland's national conference, the Global Alcohol Policy Conference and to Police Scotland. Numerous phone conversations were held with many persons interested in the licensing process. We received an invitation to the Scottish Parliament's cross-party group on 'Tobacco and Health' in order to outline the results of the association between tobacco outlet density and youth smoking. We followed this up with a workshop in December 2015, designed to bring together academics, policy makers and practitioners working in relevant areas to take stock and consider future opportunities for impact and research needs.

### 2.3. Potential barriers and facilitators to research impact

In this section we reflect on our experience throughout the processes outlined above and consider potential markers of impact. We discuss this in 6 parts, using the five themes identified as potential barriers and facilitators by Oliver et al. (2014) and adding a sixth, time.

#### 2.3.1. Contact and relationships

Multiple studies of evidence use identify collaboration and relationship building as both major facilitators and barriers to the use and development of research/evidence for policy making (and thus eventual impact). Academics are encouraged to develop research in a style of co-production, thus including eventual research users from the outset. Working with research users (whether policymakers or advocacy groups) can facilitate evidence use.

In the case of our research, both third sector organisations acted as 'brokers', connecting us to the Scottish Parliament in ways that we may not have been able to achieve independently. Both organisations have experience of delivering their message in non-technical, non-academic ways. Of particular importance was the ability to tap into their network. For example, this was used to disseminate both the infographics and the website, to extend an invitation to us to present at a Scottish Parliament working group and to host a workshop bringing together our academic contacts in the field and their non-academic contacts.





Fig. 1. a: Tobacco infographic. b: Alcohol infographic.

### 2.3.2. Organisations and resources

There is a need to formulate convincing ways to represent research to numerous audiences, 'both to peers (for intellectual credibility) and to other actors such as potential users' (Smith et al., 2011 p.1373). Many non-academics cannot easily access academic work that is placed behind paywalls. Moves to ensure academic articles are available through open access may help (research outputs will only be eligible for REF, 2020 if open access versions are

available). Our use of infographics and the webmap sought to broaden the form of output beyond the academic papers which provided the evidence for the research, and played a key role in dissemination and use of our research in policy debates. But this form of output towards impact was only possible through an impact-focused grant. This both speaks to some of the benefits of the current impact agenda (in terms of providing resources for these kind of activities) and serves to underline the difficulties of



Fig. 1. (continued).

responding to recognisable barriers to research use without sufficient resources (a point [Oliver et al., 2014](#) emphasise). If we are to be encouraged to disseminate our work beyond the academy, then it is essential that both financial and organisational support are in place.

### 2.3.3. Research and researcher characteristics

Research use is supported where researchers have 'a good understanding of the policy process and the context surrounding

policy priorities' ([Oliver et al., 2014](#), p.6). In our case, we worked hard to gain an understanding of relevant policy processes, including attending parliamentary debates, evidence sessions in parliament and University led impact workshops. It was soon apparent that relevant policy processes happened at multiple levels and that geographical context and scale were critical. The fact that our research spoke directly to a national Scottish context was a definite benefit for policymakers, who expressed frustration that previous research on the topic was international and not

transferable to the Scottish experience. This ‘local’ relevance was important. Nevertheless, it became clear that there are important decision-making contexts for alcohol provision, in particular, at a local level, such as licensing boards. The nature of mortality and morbidity data meant that whilst we were able to make the argument at a national level, and, to some extent, at a regional one, it was not possible to establish associations between outlet density and harm at smaller geographical scales. We faced, in consequence, inevitable arguments about individual streets and even individual retail premises. To those stakeholders prepared to argue against our findings, questions of scale were used to do so.

#### 2.3.4. Policymaker characteristics

Policymakers’ own research skills and beliefs about the utility of evidence are important factors in evidence use. Judgements and values are held by everyone (academics included) and such characteristics inevitably inform interpretation. While researchers may feel that their arguments and suggestions ought to be given credibility if, as is claimed, the work is based on robust methods and sound interpretations, their arguments will almost certainly not be the only ones advanced in policy debates. In our work we encountered a plethora of anecdotal evidence. In an evidence session to the Scottish Parliament delivered by the lead author, both members of Parliament and other witnesses used anecdotal arguments. One witness admitted *‘perhaps flying by the seat of my pants and expressing a personal view’* when criticising the methodology used in the analysis. In separate forums we were also told stories of family members drinking heavily all their lives and dying from, what they considered to be an unrelated cause. McDonough (2001) refers to such use of anecdote as an ‘omnipresent form of policy discourse’ (p.207). Experiential and anecdotal accounts are not easily challenged by recourse to the available empirical evidence. They are different forms of knowledge, rely on different evidence, yet play an important and legitimate role in policy formation. One challenge for researchers is to consider how best to engage with different forms of knowledge, particularly when claims run counter to the research they have undertaken. One option, might be to work with local communities, or incorporate qualitative research into study designs in ways that enable researchers to more easily engage with these dimensions of policy and public debates. Within the timeframe of our research project, this was not possible; so we instead opted to focus on identifying policy actors who did appear to be persuaded by (or at least open to) the available research evidence, either because they happened to have a particular interest in research evidence generally or because the research findings supported an agenda to which they were already committed. In our case, we had contact with an MSP who had a medical background and who had already been arguing for the need to take seriously the ill-effects of alcohol in Scottish society. He used our findings presented at the evidence briefing session to draft an amendment to a Bill that was passing through Parliament at the time. This illustrates not just individual policymakers’ variable characteristics but the fact that, as researchers, we have to negotiate with others tacit expertise in a variety of ways.

#### 2.3.5. Policy characteristics

The policy making process is complex and there are many competing pressures within this environment. This can be a particular obstacle for health policy development where it is seen to be in tension with economic policy goals (Smith, 2013). Alcohol and tobacco policy arenas are characterised by many influential actors with clear implications for public health and public debate (Hawkins et al., 2012; Holden and Lee, 2009). In our case there was vested interest in our research from those allied to the alcohol/tobacco industries. Blogs and articles criticising our approach could

be seen as potential barriers to the uptake of any related evidence in the policy process. Evidence of such criticism can be found here <http://sltn.co.uk/2015/06/25/health-research-beggars-belief/>

#### 2.3.6. Timeliness

Many studies included in Oliver et al. (2014) review identified timeliness of research as both a potential barrier and a potential facilitator to evidence use. This observation is supported by political science theories of policy change. Kingdon (1984) highlighted the importance of ‘policy windows’; moments in which three ‘streams’ relating to political circumstance, public interest in particular problems and proposals for policy solutions to those problems coalesce to enable opportunities for policy change. In our case, the high social, health and economic costs associated with alcohol and tobacco use, and the poor performance of Scotland relative to many other countries in this regard meant that, the ‘problem stream’ was already favourable. At the time of our research dissemination, the ‘politics stream’ was favourable. MSPs were considering evidence for a new bill (Air Weapons and Vehicle Licensing Bill (including alcohol licensing)), debating the progress made on Scotland’s relationship with alcohol and considering ways to make Scotland Tobacco Free by 2025. The policy stream is more complex, and perhaps the stream, which prevented the policy window from being fully open. Three possible policy options have been suggested to reduce alcohol harm at a population level; taxation, control of physical access and advertising restrictions (WHO, 2004). Our research highlighted the potential of controlling physical access as one part of the solution, whilst acknowledging the need for a multi-pronged approach. The complexities of implementing all three have been acknowledged elsewhere (Butler, 2015).

Being aware of the speed with which ‘policy windows’ can close, and the fact that our window was only partial, there was an element of pressure upon us to undertake the impact work within a short time-frame. This had important implications for our other professional activities. The increasing emphasis being placed on achieving demonstrable research impact has not replaced any of these previous roles but is rather an additional set of activities for which we are expected to find time to undertake. These activities are often, as Pickett and Wilkinson make clear, time-intensive, requiring travel and frequently occurring outside normal working hours (Pickett and Wilkinson, 2015). The changing nature of academic labour and the hyperinflation of what is expected of academics within a neoliberalising academy (Olsen and Peters, 2005) was already being commented on pre-impact agenda (Gill, 2009) and our experiences suggest an emphasis on research impact is exacerbating this problem.

### 3. Measurement and reward of impact

This paper has outlined an impact journey, showing how the route to impact was neither linear nor immediately ‘impactful’. What did we achieve? Our ‘impact’ can be evidenced by national public radio debates, use of our infographics in annual reports and election related material, evidence of webmap use in local area reports, citation of our research in two Parliamentary sessions, evidence to a Parliamentary committee and cross-party group, a draft amendment to a bill and finally, commendation of our work by 27 MSPs in a Parliamentary motion (<http://www.scottish.parliament.uk/parliamentarybusiness/28877.aspx?SearchType=Advance&ReferenceNumbers=S4M-13678&ResultsPerPage=10>). In REF terms however, whilst this may be evidence of modest, or indeed considerable ‘impact’, we have not demonstrated measurable change such as changing policy direction or shaping relevant legislation (see Table 1 and REF, 2011).



Indeed in supporting REF documentation, it was made clear that ‘Dissemination activity – without evidence of its benefits – will not be considered as impact’ (Research Excellence Framework 2014, 2011). Of the 18 indicators listed in the guidance provided to the panel, we have evidence for 6 of these. We reemphasise the important distinction between 2\* and 3\* case studies and the related funding outcomes. We do however understand that this list is not exhaustive, or indeed prescriptive, and that time is important; we cannot expect immediate impact and recognise that, in the long term we may deliver further impact, but for now we refrain from constructing a ‘fairytale of influence’ (something UK researchers have expressed concerns about (Dunleavy, 2012; Smith and Stewart, 2016)).

While there may be circumstances in which a linear model of knowledge translation and impact ‘measurement’ is appropriate, there are reasons to be circumspect about its universal utility (Weiss, 1978; Rein, 1980). A rather more nuanced notion of impact should be attentive to the connections, conversations and impressions, none of which can be measured in a metric sense as outcomes with reach and significance (in any case no objective criteria of these indicators are available (Dunleavy, 2012)). To demonstrate required metric based evidence. We now face the prospect of identifying the uptake of our work, some of which may be unattributed to the source, requiring contact with research users to request attribution. This pursuit of evidence of impact requires a substantial investment of time and resources, not secured within the grant itself. Once again, this raises the issue of time: to what extent do our working practices allow for such in-depth paper trail building exercises? If we are to make space for this kind of work, what are the costs of this, what activities are we then not doing? And does it make sense to make these kinds of investments as policy change is dependent on a wealth of factors unrelated to research (Smith and Katikireddi, 2013). Doing so may not, in the end, yield evidence of the kind of direct, linear impact that REF currently requires?

Perhaps what is needed is a more explicit ‘enlightenment’ model (Weiss, 1977). This proposes that it is the ideas associated with a body of research that usually influence policy (as opposed to specific studies) and that influence occurs in a diffuse manner over time. Weiss even questions whether research could really be expected to provide adequate answers to policymakers’ questions:

There has been much glib rhetoric about the vast benefits that social science can offer if only policy makers paid attention. Perhaps it is time for social scientists to pay attention to the imperatives of policymaking systems and to consider soberly what they can do, not necessarily to increase the use of research, but to improve the contribution that research makes to the wisdom of social policy (Weiss, 1979 p.431).

Our research (partly through our efforts, partly as a consequence of the fortuitous ‘policy window’) has informed debates about alcohol and tobacco in Scotland. It has sparked conversations and is beginning to influence the thinking of key policy actors (NGOs and MSPs). However, little of this (beside media dissemination and NGO use) can be measured by metrics, or even evidenced in a clear and consistent manner. Indeed, in Manville et al.’s review, panellists surveyed raised concerns regarding the difficulty of assessing impact on policy and public engagement. Panellists noted that there were fewer policy/public engagement related case studies, hypothesising that, this was because they are difficult to quantify, causing universities to be cautious in putting such case studies forward.

The ways in which impact is measured requires further thought, and lessons can be taken from the UK experience. What if the

incentives and rewards for research impact were based on Weiss. (1977) ‘enlightenment’ model? Rather than measuring only outcomes and assuming a direct path from research to policy (or other kinds of) change, we might give greater recognition to process. As social scientists we do not, and cannot expect our research alone to have an “effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia” (HEFCE, 2011, p.26) especially if we accept, as Mulgan (2005) has argued, that it is perfectly legitimate, in a democracy, for the public and politicians to choose to ignore research findings and/or to make decisions on other grounds. So what would taking Weiss. (1977) ‘enlightenment’ model as a basis for incentivising and rewarding impact look like in practice? It would involve recognising that our research is just one small part of wider understandings and whilst we can contribute to change, this often takes time and research may not represent the defining determinant of change. We should reward academics and departments that engage with external partners, the general public and interested parties, but we should not expect that all of this will lead to demonstrable change in the short to medium term. We should alter the focus of REF impact from demonstrable impact to demonstrable knowledge exchange and public engagement. It might also involve, for example, doing more to reward researchers (or knowledge brokers) who undertake synthesising type roles, collating and reviewing large disparate bodies of academic knowledge for non-academic audiences (as opposed to the current approach which largely encourages researchers to try to achieve impact for their own research). Such a focus would include more nuanced metrics of participation, involvement and action rather than ‘change’.

Such a shift seems desirable for several reasons. It encourages researchers to engage with audiences beyond academia as a matter of course. This would not require researchers to plan for evidence that should lead to demonstrable change. Second, it reduces (though does not entirely remove) the extent to which the outcomes of impact are dependent upon serendipitous circumstances. Empirically informed theories of policy change consistently emphasise the role of external events over which researchers have little control. The current system of REF is, at least to some extent, likely to be rewarding luck. If, instead, we recognise the processes and mechanisms that researchers engage with in promoting awareness of, and engagement with research, we will be focusing rewards and incentives on aspects over which researchers have some control. Third, critical academic work cannot – should not – be used to meet the short-term and immediate needs of policy makers. This is important in health geography, concerned as it is with questions over the broader determinants of health, such as housing, wealth, education and power. It is precisely because these are of importance that we need to reconsider the impact agenda. This paper is a timely addition to the literature. With the Stern review of REF underway (Department for Business, 2016); we hope that our work might help to inform questions about how impact is captured and assessed in the future. ‘Impact chasing’ should not distract us from the research questions we know are important. Shifting the incentives and rewards from demonstrable evidence of impact to demonstrable engagement is less likely to constrain research and is more in line with Kneale (2014) view that impact is not something achieved; rather practised through the research process, with unexpected twists and turns.

## Acknowledgements

We acknowledge the funders of the original research, The Scottish Collaboration for Public Health Research and Policy. We also acknowledge funding from the ESRC IAA for the dissemination. We

acknowledge the contribution of Catherine Tisch and Elizabeth Richardson to the earlier research and to Elizabeth Richardson in the development of the WebMap. We also thank one internal reviewer with REF experience as well as three anonymous reviewers for their very helpful comments.

## References

- Butler, S., 2015. Ireland's public health (alcohol) bill: policy window or political sop? *Contemp. Drug Probl.* 42, 83–86.
- Department for Business, Innovation and Skills, 2016. Lord Stern's Review of the Research Excellence Framework. Call for Evidence.
- Dunleavy, P., 2012. REF Advice Note 1: Understanding HEFCE's Definition of Impact. LSE Blogs accessible here. <http://blogs.lse.ac.uk/impactofsocialsciences/2012/10/22/dunleavy-ref-advice-1/>.
- Federation for the Humanities and Social Sciences, 2014. Humanities, Social Sciences and Arts Research: a Framework for Identifying Impact and Indicators. Ottawa, Ontario.
- Gill, R., 2009. Breaking the Silence: the Hidden Injuries of Neo-liberal Academia.
- Graham, I.D., et al., 2006. Lost in knowledge translation: time for a map. *J. Contin. Educ. Health Prof.* 26 (1), 13–24.
- Greenhalgh, T., Fahy, N., 2015. Research impact in the community-based health sciences: an analysis of 162 case studies from the 2014 UK Research Excellence Framework. *BMC Med.* 13 (1), 1–12. <http://dx.doi.org/10.1186/s12916-015-0467-4>. Available at:
- Hawkins, B., Holden, C., McCambridge, J., 2012. Alcohol industry influence on UK alcohol policy: a new research agenda for public health. *Crit. Public Health* 22 (3), 297–305. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3396356/>.
- HEFCE, 2011. Assessment Framework and Guidance on Submissions, p. 42. January 2012.
- Holden, C., Lee, K., 2009. Corporate power and social policy: the political economy of the transnational tobacco companies. *Glob. Soc. Policy* 9 (3), 328–354. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2836532/>.
- Kingdon, J.W., 1984. *Agendas, Alternatives and Public Policies*. Little, Brown, Boston.
- Kneale, J., 2014. Accidental impact. *ACME Int. E-J. Crit. Geogr.* 13 (1), 43–46.
- Leathwood, C., Read, B., 2012. REF is leading to sleepless nights over a decrease in time and opportunities to conduct research. *Impact Soc. Sci. Blog*. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2012/07/30/ref-sleepless-nights-time-space-research/> [Accessed 15.02.15].
- Manville, C., 2015. Assessing Impact Submissions for REF2014: an Evaluation. Available at: [http://www.rand.org/content/dam/rand/pubs/research\\_reports/RR1000/RR1032/RAND\\_RR1032.pdf](http://www.rand.org/content/dam/rand/pubs/research_reports/RR1000/RR1032/RAND_RR1032.pdf).
- McDonough, J.E., 2001. Using and misusing anecdote in policy making. *Health Aff.* 20 (1), 207–212.
- Mulgan, G., 2005. Government, knowledge and the business of policy making: the potential and limits of evidence-based policy. *Evid. Policy* 1 (2), 215–226.
- Oliver, K., et al., 2014. A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC Health Serv. Res.* 14 (2).
- Olssen, M., Peters, M.A., 2005. Neoliberalism, higher education and the knowledge economy: from the free market to knowledge capitalism. *J. Educ. Policy* 20 (3), 313–345.
- Pain, R., Kesby, M., Askins, K., 2011. Geographies of impact: power, participation and potential. *Area* 43 (2), 183–188.
- Pearce, J., et al., 2015. Tobacco retail environments and social inequalities in individual-level smoking and cessation among scottish adults. *Nicot. Tob. Res.* 18 (2), 138–146.
- Pickett, K., Wilkinson, R., 2015. The spirit level: a case study of the public dissemination of health inequalities research. In: Smith, K.E., Bambra, S., Hill, S.E. (Eds.), *Health Inequalities: Critical Perspectives*. Oxford University Press, Oxford, pp. 282–294.
- Rein, M., 1980. Methodology for the study of the interplay between social science and social policy. *Int. Soc. Sci. J.* xxii (2), 361–368.
- Research Excellence Framework, 2011. Decisions on Assessing Research Impact (March). Available at: <http://www.ref.ac.uk/pubs/2011-01/>.
- Richardson, E., Shortt, N.K., Pearce, J., 2014. Alcohol-related Illness and Death in Scottish Neighbourhoods: Is There a Relationship with the Number of Alcohol Outlets? Available at: <http://www.alcohol-focus-scotland.org.uk/media/1259/crsh-research-alcohol-outlets-and-health.pdf>.
- Shaxson, L., Bielak, A. (Eds.), 2012. Expanding Our Understanding of K\* (Kt, KE, Ktt, KMB, KB, KM, etc.): a Concept Paper Emerging from the K\* Conference Held in Hamilton, Ontario, Canada, April 2012.
- Shortt, N.K., et al., 2015. A cross-sectional analysis of the relationship between tobacco and alcohol outlet density and neighbourhood deprivation. *BMC Public Health* 15, 1014. Available at: <http://www.biomedcentral.com/1471-2458/15/1014>.
- Shortt, N.K., et al., 2016. The density of tobacco retailers in home and school environments and relationship with adolescent smoking behaviours in Scotland. *Tob. Control* 25 (1), 75–82. Available at: <http://tobaccocontrol.bmj.com/content/early/2014/11/04/tobaccocontrol-2013-051473.abstract>.
- Slater, T., 2012. Impacted geographers: a response to Pain, Kesby and Askins. *Area* 44 (1), 117–119.
- Smith, K.E., 2013. *Beyond Evidence Based Policy in Public Health: the Interplay of Ideas*. Palgrave Macmillan, Basingstoke.
- Smith, K.E., Katikireddi, S.V., 2013. A glossary of theories for understanding policymaking. *J. Epidemiol. Commun. Health* 67 (2), 198–202.
- Smith, K., Stewart, E., 2016. We need to talk about impact: why social policy academics need to engage with the UK's research impact agenda. *J. Soc. Policy* 1–19.
- Smith, S., Ward, V., House, A., 2011. "Impact" in the proposals for the UK's Research Excellence Framework: shifting the boundaries of academic autonomy. *Res. Policy* 40 (10), 1369–1379. Available at: <http://dx.doi.org/10.1016/j.respol.2011.05.026>.
- Van Noorden, R., 2015. Interdisciplinary research by the numbers. *Nature* 525, 306–307. Available at: <http://www.nature.com/news/interdisciplinary-research-by-the-numbers-1.18349>.
- Weiss, C.H., 1977. Research for Policy's sake: the enlightenment function of social research. *Policy Anal.* 3 (4), 531–545.
- Weiss, C., 1978. Improving the linkage between social research and public policy. In: Lynn, L.E. (Ed.), *Knowledge and Policy: the Uncertain Connection*. National Academy of Sciences, Washington DC.
- Weiss, C.H., 1979. The many meanings of research utilization. *Public Adm. Rev.* 39 (5), 426–431.
- WHO, 2004. *Global Status Report: Alcohol Policy* (Geneva).